

**ABRASIVE ARTICLES HAVING ABRASIVE
LAYER BOND SYSTEM DERIVED FROM SOLID,
DRY-COATED BINDER PRECURSOR PARTICLES
HAVING A FUSIBLE, RADIATION CURABLE COMPONENT**

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ABSTRACT OF THE DISCLOSURE

10 The present invention involves the use of powder coating methods to form coated
abrasives. In one embodiment, the powder is in the form of a multiplicity of binder
precursor particles comprising a radiation curable component. In other
embodiments, the powder comprises at least one metal salt of a fatty acid and
optionally an organic component that may be a thermoplastic macromolecule, a
radiation curable component, and/or a thermally curable macromolecule. In either
15 embodiment, the powder exists as a solid under the desired dry coating conditions,
but is easily melted at relatively low temperatures and then solidified also at
reasonably low processing temperatures. The principles of the present invention
can be applied to form make coats, size coats, and/or supersize coats, as desired.

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